



NORYL GTX™ Resin GTX918WR

Asia Pacific: COMMERCIAL

High flow PPE+PA for under-the-hood and electrical applications. With mold release

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	630	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	590	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	11.4	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	53	%	ASTM D 638
Tensile Modulus, 50 mm/min	8300	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1000	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	24100	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 50 mm/min	60	MPa	ISO 527
Tensile Stress, break, 50 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.5	%	ISO 527
Tensile Strain, break, 50 mm/min	30	%	ISO 527
Flexural Stress, yield, 2 mm/min	85	MPa	ISO 178
Flexural Modulus, 2 mm/min	2200	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	20	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	414	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	20	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	20	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	242	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	188	°C	ASTM D 648



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THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	148	°C	ASTM D 648
CTE, -40°C to 40°C, flow	6.48E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.84E-05	1/°C	ASTM E 831
Thermal Conductivity	0.25	W/m-°C	ASTM C 177
CTE, 23°C to 60°C, flow	8.E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	8.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate A/50	245	°C	ISO 306
Vicat Softening Temp, Rate B/50	190	°C	ISO 306
Vicat Softening Temp, Rate B/120	195	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	185	°C	ISO 75/Be
PHYSICAL			
Specific Gravity	1.09	-	ASTM D 792
Water Absorption, (23°C/sat)	4.2	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm (5)	1.3 - 1.6	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	1 - 1.3	%	SABIC Method
Melt Flow Rate, 280°C/5.0 kgf	45	g/10 min	ASTM D 1238
Melt Volume Rate, MVR at 280°C/1.2 kg	5	cm ³ /10 min	ISO 1133



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- Do NOT mix NORYL GTX* resin with other grades of NORYL* resins.

PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	95 - 105	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.07	%
Minimum Moisture Content	0.02	%
Melt Temperature	270 - 295	°C
Nozzle Temperature	270 - 295	°C
Front - Zone 3 Temperature	265 - 295	°C
Middle - Zone 2 Temperature	260 - 295	°C
Rear - Zone 1 Temperature	255 - 295	°C
Mold Temperature	65 - 95	°C
Back Pressure	0.3 - 1.4	MPa
Screw Speed	20 - 100	rpm
Shot to Cylinder Size	30 - 50	%
Vent Depth	0.013 - 0.038	mm

- Polystyrene and acrylic regrind are effective purging Materials. Use temperature range appropriate for particular purging resin.
- Regrind must also be dried. Maximum 25% regrind.
- Dry at recommended temperatures and times for optimum performance. Overdrying can cause loss of physical properties and/or create appearance defects. Do not exceed recommended basic drying time and temperature above or:
 - 4-8 hrs at 95°C (200°F), 10 hrs max
 - 6-12 hrs at 80°C (175°F), 16 hrs max
 - 8-16 hrs at 65°C (150°F), 24 hrs max
- AVOID air circulating tray ovens. Moisture levels in heated ambient air can exceed moisture level in the resin itself, causing moisture ABSORPTION not drying.
- Avoid melt temperature in excess of 300°C (575°F) and residence times over 6-8 minutes (may affect properties and/or appearance).
- Nozzle temperature controls assist in elimination of drool premature freeze-off.
- Shot sizes in excess of 50% barrel capacity can lead to difficulties in providing a consistent, homogenous plastic melt.